# EPA IT/IM DIRECTIVE POLICY

| Unmanned Aircraft Systems (UAS) Policy | | |
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| Directive No: | CIO Approval: | Review Date: |

*Issued by the EPA Chief Information Officer,*
*Pursuant to Delegation 1-19, dated 07/07/2005*

## Unmanned Aircraft Systems (UAS) Policy

### 1. PURPOSE

The purpose of this directive is to provide EPA with policy on the use of Unmanned Aircraft Systems (UAS). This policy enables the Agency to comply with the 2015 Presidential Memorandum: Promoting Economic Competitiveness While Safeguarding Privacy, Civil Rights and Civil Liberties in Domestic Use of Unmanned Aircraft Systems as well as FAA Order 8900.1, Volume 16, Unmanned Aircraft Systems (UAS).

### 2. SCOPE

This directive covers all methods of access to UAS by EPA personnel. The directive also provides guidance to EPA personnel entering into Contracts, Interagency Agreements or Grants and Cooperative Agreements (hereafter "grants") that include access to UAS. As of the writing of this document, EPA does not have the statutory authority to own UAS due to appropriations limitations prohibiting the use of funds to buy, maintain, or operate aircraft. In addition, leasing of UAS by EPA personnel is not permissible at this time due to unresolved training, tracking and liability concerns. Permissible access to UAS through different mechanisms is described in detail in this policy. This directive covers use requirements for UAS contracts, privacy, civil rights and civil liberty protections, security and data management at EPA. While balloons are not considered UAS, they are considered aircraft and fall under the same appropriation restrictions as well as other Agency restrictions, requirements and policies.

### 3. AUDIENCE

The audience for this policy includes all EPA organizations, officials, employees and individuals as well as contractors and grantees, if applicable, who utilize UAS technology.

### 4. BACKGROUND

The purpose of drafting a UAS Policy for EPA is to create a framework through which EPA Regions, Program offices and grant recipients can take advantage of UAS technology. UAS technology will allow EPA to meet its mission goals with additional data collection capabilities while increasing safety, reducing costs and increasing efficiency.

For example, safety will be increased by allowing EPA staff to monitor hazardous conditions from a safe distance, identify hazards before entering a hazardous zone, and allow access to difficult or dangerous areas with minimal risk. Costs will be reduced by enabling the Agency to use UAS to collect critical data for a fraction of the cost of human-centered data collection methods or traditional airplanes. Efficiency will be increased in the ability to quickly deploy UAS in hours, instead of the days that it can take to deploy

personnel-intensive teams. UAS also allow multiple locations to be monitored simultaneously with fewer personnel.

The *2015 Presidential Memorandum: Promoting Economic Competitiveness While Safeguarding Privacy, Civil Rights, and Civil Liberties in Domestic Use of Unmanned Aircraft Systems* states that Federal Agencies are required to develop policies for UAS that take into account privacy, civil rights and civil liberties protections, accountability, and transparency. In addition, one of the primary drivers for this policy is the safety of EPA staff, contractors, and grantees tasked with capturing data in hazardous circumstances. Developing a framework under which UAS are used will enable EPA to increase safety for staff and contractors. Allowing EPA use of UAS will also increase EPA's ability to effectively collect data, including furthering research that is critical for protecting the public and the environment. Cutting costs and "leaning" the Agency's data collection business processes are additional drivers.

UAS offer data collection advantages by:

- Increasing safety:
  - Affording operators safe monitoring distances.
  - Affording operators an opportunity to identify the location of hazards before entering into a hazardous zone.
  - Accessing difficult or dangerous to access locations with minimal risk.
- Reducing costs
  - Providing cost-effective data ($1000s vs other methods which can be more costly).
  - Deploying fewer personnel.
- Increasing efficiency:
  - Can be quickly deployed (hours not days).
  - Monitoring multiple locations simultaneously with fewer personnel.
- Allowing the deployment of additional technologies for data collection and research purposes, such as:
  - Photo/Video: High resolution, infrared/thermal/FLIR, and multispectral cameras
  - Gas Sensors: $H_2S$, $SO_2$, NO, $NO_2$, HCHO, VOCs, CO, Cl, HCl, HCN, $NH_3$, $CH_3$, dioxins, particulates, other air sampling capabilities
  - ERT VIPER integration possible for real-time data collection and transmission
  - Remote Sensing: Imaging spectroscopy, LiDAR, 3D models, volume measurement (landfill assessment/excavation areas), vegetation analysis, POV depiction, including for emergency situations

## 5. AUTHORITY

- *2015 Presidential Memorandum: Promoting Economic Competitiveness While Safeguarding Privacy, Civil Rights, and Civil Liberties in Domestic Use of Unmanned Aircraft Systems*
- Federal Aviation Administration (FAA) 14 CFR Part 91—GENERAL OPERATING AND FLIGHT RULES
- FAA 14 CFR Part 107 - SMALL UNMANNED AIRCRAFT SYSTEMS
- FAA Order 8900.1, Volume 16, Unmanned Aircraft Systems (UAS)

## 6. POLICY

- FAA regulation at 14 CFR 1.1 defines "aircraft" as a device that is used or intended to be used for flight in the air. UAS are considered aircraft and must comply with applicable regulations, policies and procedures required by FAA and EPA and its offices. While balloons are not considered UAS, they are considered aircraft and fall under the same appropriation restrictions as well as the other Agency restrictions, requirements and regulations. All data collected for EPA projects via UAS must adhere to all relevant laws and regulations, EPA policies and procedures regarding data management, security, records retention and schedules, audits, reports, and other agency directives.

- **Budget and Financial Considerations and Related to UAS**[1] Currently EPA may not purchase any aircraft or UAS aircraft and may only purchase UAS services using funds from the EPA Environmental Programs and Management (EPM) appropriation. Specific details below:
    - 31 U.S.C. 1343(d) prohibits the use of funds for EPA to buy, maintain, or operate aircraft absent specific statutory authority. This includes UAS and balloons of any size.
    - None of EPA's appropriated funds are specifically available for EPA to buy aircraft. Accordingly, no program at EPA should own aircraft, regardless of the program's source of funding.
    - Only EPA's Environmental Programs and Management (EPM) appropriation contains language making it specifically available for the "hire" (i.e. leasing), "maintenance, and operation" of aircraft. However, as a policy matter, EPA does not currently allow for the leasing of UAS due to the fact that EPA programs are not in place for training pilots as well as tracking and maintaining leased UAS. Therefore, EPM funds may only be used to "maintain" and "operate" aircraft in the manner identified below.
    - When EPA is operating under an EPM-reimbursable agreement from an agency that has authority to use UAS services, then EPA may also access UAS services consistent with this policy. For example, when the Federal Emergency Management Agency (FEMA) issues a Mission Assignment under the Stafford Act, EPA establishes a reimbursable line of accounting in the EPM account. Therefore, actions undertaken pursuant to reimbursable Stafford Act Mission Assignments qualify as being supported by EPM funds.
    - EPA grantees are not restricted by 31 U.S.C. 1343(d) from using grant funds for UAS-related costs so long as doing so would be within the scope of the grant and otherwise allowable under the grant regulations.
- Programs **currently supported by EPM funds** may "maintain" and/or "operate" UAS directly or indirectly through the following mechanisms (please see Appendix 13.1 for example use cases):
    - **Contract:** Contracts and task orders appropriately funded by EPM funds may include explicit terms and conditions regarding the maintenance and operation of UAS as applicable. The contractor may own, lease, rent, maintain, and

[1] *A statutory exception to appropriations law restrictions exists for certain work in protecting rivers and harbors. If programs are interested in availing themselves of this exception, they should contact the Office of General Counsel to determine whether and to what degree this exception applies.*

operate a UAS as necessary to provide the requested work. However, as a legal matter, the contract may not contain terms that transfer ownership of the UAS to EPA at any time. And, as a policy matter, the contract may not lease the UAS to EPA or allow EPA staff to directly operate the UAS.

- **Interagency Agreement (IA):** Where EPM funds support a given EPA program, EPA may use EPM funds to pay another federal agency to maintain and operate a UAS on EPA's behalf, whether or not the other agency has an independent interest in the flight. The other agency may own, lease, rent, maintain, and operate a UAS as necessary to provide the requested work. However, as a legal matter, the IA may not contain terms that transfer ownership of the UAS to EPA. And, as a policy matter, the IA may not lease the UAS to EPA or allow EPA staff to directly operate the UAS.
- **Grant (including Cooperative Agreement):** EPA grantees are not restricted by 31 U.S.C. 1343(d) from using grant funds for UAS-related costs so long as doing so would be within the scope of the grant and otherwise allowable under the grant regulations. Therefore, EPA grant and cooperative agreement recipients may use EPA awarded funds for UAS-related costs where the costs are reasonable and necessary for the performance of the Federal award. However, programs must not direct, encourage or suggest that financial assistance recipients transfer title or possession of UAS to EPA.

- Programs that are **not currently supported by EPM funds**[2] may **not** "maintain" and/or "operate" UAS directly or indirectly. Such "non-EPM programs" may include, but are not limited to, research funded by Science and Technology (S&T) funds, response actions funded by Superfund money (including Superfund special accounts), and actions undertaken using Oil funds (including reimbursable funds provided under a Pollution Removal Funding Authorization). Nevertheless, there are several permissible mechanisms non-EPM programs may use to access UAS-generated data without necessarily "maintaining" or "operating" a UAS.
  - **Contract:** Non-EPM programs may acquire preexisting data by contract that may have been previously gathered by UAS. Such contracts are not service contracts for the "operation" of an aircraft, because the aircraft is not being operated at the request of EPA.
  - **Interagency Agreement:** If another agency has an independent interest in conducting a joint project in cooperation with EPA, and would like to contribute funds for and/or the use of its own aircraft in furtherance of that project, EPA may enter into an interagency agreement to provide funds and other resources for that same project from any appropriation available for that purpose, provided the other agency covers 100% of the costs of purchasing, maintaining, and/or operating the aircraft using their own authority. EPA may not use any non-EPM funds to pay for flight-related costs.
  - **Grant (including Cooperative Agreement):** EPA grantees are not restricted by 31 U.S.C. 1343(d) from using grant funds for UAS-related costs so long as doing so would be within the scope of the grant and otherwise allowable under the grant regulations. Therefore, any EPA appropriated funds may be used for grants and cooperative agreements where use of a UAS is contemplated.

[2] *The Office of the Chief Financial Officer, Office of Budget, retains the discretion to decide in future fiscal years whether EPM funds will be made available for the aircraft-related costs of programs that would not otherwise be supported by EPM funds. As a policy matter, at this time, EPA has not budgeted EPM funds for the aircraft-related costs of non-EPM programs.*

However, programs must not direct, encourage or suggest that financial assistance recipients transfer title or possession of UAS to EPA.

- **Privacy, Civil Rights and Civil Liberties Protections**
  - In accordance with the 2015 Presidential Memorandum: Promoting Economic Competitiveness While Safeguarding Privacy, Civil Rights, and Civil Liberties in Domestic Use of Unmanned Aircraft Systems, EPA requires that UAS used in the Agency adheres to all Federal and Agency privacy, civil rights and civil liberties policies and procedures.
    - **Privacy Protections:** All EPA employees will comply with the Privacy Act as applicable, EPA's Privacy Policy and procedures, any other EPA privacy guidance as well as all applicable laws, regulations and privacy requirements. This means that any EPA data collection effort using UAS that may collect any Personal Identifiable Information (PII) are required to submit a Privacy Impact Assessment. Data collection efforts that do not collect any PII do not require a Privacy Impact Assessment.
    - **Civil Rights and Civil Liberty Protections:** In order to protect civil rights and civil liberties, all EPA UAS activities performed will adhere to all applicable laws, Executive Orders, and Presidential directives. Data will not be used, retained, or disseminated in any manner that will violate the First Amendment, EPA's Privacy Policy, or in any manner discriminate against persons based upon their race, sex, national origin, religion, sexual orientation, or gender identity.
    - **Accountability:** EPA will ensure that:
      - All personnel and contractors comply with requirements, rules of behavior and procedures for reporting suspected cases of misuse or abuse of UAS technologies as is required for other data collection technologies. This includes policies and procedures set forth by the EPA's Quality Program.
      - Any data-sharing agreements or policies, data use policies, and records management policies applicable to UAS conform to applicable laws, regulations, and policies.
      - State, local, tribal, and territorial government recipients of Federal grant funding, or any party participating in a project funded via Federal grants for the purchase or use of UAS for their own operations have in place policies and procedures to safeguard individuals' privacy, civil rights, and civil liberties prior to expending such funds.
    - **Transparency:** EPA will promote transparency about UAS activities while not revealing information that could reasonably be expected to compromise privacy, law enforcement or national security. EPA will provide notice to the public regarding the status of the Agency UAS Program, where in the National Airspace System (NAS) EPA UAS are authorized to operate and descriptions of categories of UAS missions. Data from UAS missions will be made publicly available in accordance with EPA's Enterprise Information Management Policy and Title 2 Open Government Data Act of the 2018 Foundations for Evidence-Based Policymaking Act - 2018 Open Government Data Act.

- **IT Security**
  - Current regulatory guidance informs the acquisition and management of IT assets and the governance of data collected.
  - As EPA's technical infrastructure grows to support full integration of UAS, revisions and additional protocols will be introduced. This includes new or revised policies, regulations, processes, and procedures. Special consideration is being given to address privacy concerns and the practical management of personal and sensitive information gathered through UAS operations.
  - EPA Offices wishing to use UAS data must have a plan in place for how they are going to collect, process, and disseminate data gathered by a UAS.
  - Coordination with the Chief Information Office (CIO) and the Chief Information Security Officer (CISO) should occur to ensure appropriate data security and data regulations are met through the Agency's FITARA and IT Portfolio Review process.

- **Data Management**
  - All EPA data gathered through UAS operations shall adhere to requirements set forth in EPA's Enterprise Information Management Policy (EIMP), H.R.4174 - Foundations for Evidence-Based Policymaking Act of 2017 and H.R. 302 Subtitle F Geospatial Data Act of 2018. Data shall also be managed according to the appropriate records management schedule and adhere to requirements outlined in EPA's Records Management directives and memoranda.
  - Specifically, EPA organizations, officials, employees and individuals or non-EPA organizations, if applicable, shall ensure information is:
    - Planned and managed according to a defined information life cycle process (appropriate for the information type) and in accordance with enterprise systems and solutions.
    - Catalogued and/or labeled with metadata, including geographic references, as appropriate, in EPA and Federal-wide registries, repositories, or other information systems.
    - Developed, maintained, and preserved in open and machine-readable formats using established standards that make information discoverable and accessible, where appropriate and feasible.
    - Made and maintained to be open and publicly accessible, unless there is a documented National Security Information (NSI) or Controlled Unclassified Information (CUI) requirement outlined within a statute/law, regulation, and/or government-wide policy, or unless otherwise protected from disclosure under federal law or EPA regulation. In these cases, internal, external, and associated safeguards must be instituted.

## 7. ROLES AND RESPONSIBILITIES

- Office of Mission Support - Administration and Resources Offices
  - Provide oversight and support for contracts, grants and Interagency Agreements used to collect data through UAS.
- Office of Mission Support - Environmental Information Offices

- Coordinate and oversee information management policies, guidelines and procedures to ensure compliance with relevant Federal laws, regulations and policies. Policies, guidelines and procedures address, but are not limited to, topics such as privacy, IT security, records management, data cataloging, storage, and publishing.
- Publish privacy policy, provide guidance, and collaborate with Programs and Regions to evaluate program activities to ensure privacy considerations are addressed for the collection, use, retention and dissemination of Personally Identifiable Information and appropriate safeguards are implemented to protect individual privacy, civil rights, and civil liberties.

- Office of Chief Financial Officer
  - Provides guidance on UAS budget and financial issues, particularly regarding which sources of funding may be used to fund UAS Services.
  - Issue guidance regarding how UAS resources should be coded.
- Office of General Counsel
  - Provide legal guidance and advise on legal matters with OCFO, OMS, program offices and regions.
- Program Offices and Regions
  - Implement Agency UAS policies, procedures and guidelines.
  - Develop and implement organizational-specific UAS policies, procedures, guidance and training consistent with Agency and Federal laws, executive orders, regulations, policies and standards.

## 8. RELATED INFORMATION

EPA is developing an Unmanned Aircraft Systems (UAS) Desk Guide that provides procedural information regarding EPA use of UAS technology. It will aid project leads and managers in topics such as UAS contracts considerations, data delivery specifications, information management and cybersecurity best practices.

## 9. DEFINITIONS

- **Certificate of Waiver or Authorization (COA)—**An FAA authorization for a specific UAS operation.
  - **Blanket COA.** A COA issued to the proponent allowing small UAS (sUAS) (less than 55 pounds) operations during daytime visual flight rules (VFR) conditions at specific altitudes and outside of certain distances from airports and heliports.
  - **Standard COA.** A COA issued for operation that does not fit into the parameters of the Blanket.
- **Civil Aircraft—**Aircraft other than public aircraft.
- **Government/Public Aircraft—**Any aircraft owned, leased, contracted, rented or chartered, and used by a Federal Government agency.
- **MOU —** A Memorandum of Understanding (MOU) is a written document describing a cooperative relationship between EPA and another party working together on a project or to meet an agreed upon objective. A MOA serves as a legal document and describes the terms and details of the partnership agreement.
- **National Airspace System (NAS)—**The common network of U.S. airspace — air navigation facilities, equipment, and services; airports or landing areas; aeronautical

charts, information and services; rules, regulations, and procedures; technical information; and manpower and material.

- **Recreational Aircraft—**Recreational or hobby UAS use is flying for enjoyment and not for work, business purposes, or for compensation or hire. In the FAA's Interpretation of the Special Rule for Model Aircraft, the FAA relied on the ordinary, dictionary definition of these terms. UAS use for hobby is a "pursuit outside one's regular occupation engaged in especially for relaxation." UAS use for recreation is "refreshment of strength and spirits after work; a means of refreshment or division."
- **Small Unmanned Aircraft System (sUAS)—**A small UA less than 55 pounds and its associated elements (including communication links and the components that control the small UA that are required for the safe and efficient operation of the small UA in the NAS.
- **Special Government Interest (SGI) -** First responders and organizations responding to natural disaster or other emergency situations may be eligible for expedited FAA approval to conduct UAS operations in controlled airspace.
- **Unmanned Aircraft (UA)—**An aircraft operated without the possibility of direct human intervention from within or on the aircraft.
- **Unmanned Aircraft System (UAS)—**An unmanned aircraft and associated elements (including communication links and the components that control the unmanned aircraft) that are required for the pilot in command to operate safely and efficiently in the national airspace system.
- **Unmanned Aerial Vehicle (UAV)—**An aircraft that can navigate without a human pilot on board; an aircraft piloted by remote control or onboard computers.

## 10. WAIVERS

Due to the fact that EPA is currently prohibited from buying or leasing UAS, UAS operations will be conducted by a contractor, grantee, or other federal agency under an Interagency Agreement as described in Section 6 above. The entity responsible for flying the UAS mission will be responsible to obtain a Certificate of Operation (COA) or operate under the rules and requirements for sUAS. It is imperative that all flight operations follow FAA requirements for operation of UAS in the National Airspace.

## 11. MATERIAL SUPERSEDED

None

## 12. CONTACTS

Office of Mission Support – Environmental Information; Office of Information Management

***Vaughn Noga***
***Deputy Assistant Administrator for Environmental Information***
***and Chief Information Officer***
***U.S. Environmental Protection Agency***

## APPENDIX 13.1: EXAMPLE CONTRACT/FUNDING USE CASES

- **Non-EPM programs acquiring preexisting data by contract that may have been previously gathered by UAS:**
  - The Oil program would like to collect certain data as part of its compliance monitoring program that would probably be collected by UAS. However, because the program is funded with Oil funds and not EPM, they know they cannot explicitly contract for the operation of a UAS, and they cannot allow a contractor to propose the use of UAS in a work plan. They discover the existence of a preexisting dataset that almost matches what they need. EPA contracts for the purchase of the dataset instead.

- **Non-EPM Funded Interagency Agreement:**
  - EPA is interested in how severe weather impacts particulate matter distribution in the atmosphere, but EPA doesn't have any EPM funds available to fund data collection. EPA does have some S&T funds available. The National Weather Service is about to deploy one of its hurricane planes as part of its regular forecasting operations. EPA enters into an IA with the National Weather Service under the statutory cooperation authority in the Clean Air Act and pays for the costs of installing a particulate matter sensor on the wing of the National Weather Service's airplane, as well as pays for the associated data collection and analysis. The National Weather Service pays for all costs associated with piloting the aircraft. This is appropriate because EPA is not using non-EPM funds to pay another agency to operate an aircraft on EPA's behalf.

- **Contracts and work plans appropriately funded by EPM funds:**
  - EPA needs to collect data on the environmental situation of a facility subject to a Risk Management Plan (RMP) under section 112 of the Clean Air Act. Because this work is appropriately funded by EPM funds, EPA may obligate those funds onto a contract for the purpose of surveying the RMP facility. Because EPA is using EPM funds, there is no problem if the contractor proposes in its work plan to survey the site using a UAS.

- **Interagency Agreements Supported by EPM Funds:**
  - As part of the Chesapeake Bay geospatial program, EPA would like to use a UAS as part of intertidal monitoring. The Coast Guard already has a UAS capable of performing this work, but the Coast Guard has no independent interest in surveying the Chesapeake Bay at this time. Because the Chesapeake Bay geospatial program is supported by EPM funds, EPA could enter into an IA with the Coast Guard under the Economy Act and pay that agency to perform the necessary aerial work for EPA.

- **Grants (including Cooperative Agreements):**
  - EPA needs to survey a Superfund site. However, Superfund money may not be used to operate aircraft, so the program may not obligate those funds onto a response action contract for the purposes of a survey conducted by UAS. However, EPA grantees are not restricted from using federal grant funds for aircraft so long as the costs are allowable and allocable. EPA enters into a

cooperative agreement with the state under CERCLA 104(d), and the state uses those funds to survey the site using a UAS.

- **FEMA Mission Assignment under the Robert T. Stafford Act:**
  - The Federal Emergency Management Agency (FEMA) tasks the EPA, under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, and Emergency Support Function 10 (ESF-10) of the National Response Plan, in support of a State/Territory or Tribal request to evaluate, assess, and conduct a cleanup of oil and hazardous materials released as a result of a natural disaster (hurricane, typhoon, flood, wildland fire, earthquake, volcanic, or other catastrophic natural phenomena). Because the damage and debris field are so widespread, difficult to safely access, and may present unique hazards to the health and safety of response personnel (fire, unknown gas plumes, high water, unstable structures, shock sensitive chemicals) the use of UAVs is necessary to allow real-time identification on the extent of damage without placing personnel at risk. Since the actions EPA is conducting under a FEMA reimbursable Mission Assignment (MA) qualify as being supported by EPM funds, EPA can have its response contractor implement the use of UAS/UAVs to survey and assess the areas damaged by the disaster.